WE CLAIM:

1. A composition for delivery of a biologically active agent to a cell, the composition comprising lipid-based vehicles which comprise conjugates of the formula:

$$A - (BC)$$

wherein:

A is a component of said vehicles;

B is a moiety comprising an internalizing peptide;

C is a moiety comprising a biologically active agent;

(BC) is a complex comprising B and C in which B is conjugated to C; and,

A is conjugated to (BC).

2. The composition of claim 1, wherein (BC) is conjugated to a lipid in A.

3. The composition of claim 1 or 2, wherein A is conjugated to (BC) by a coordinate covalent linkage.

4. The composition of claim 3, wherein the linkage is between a metal-chelating moiety and a metal-affinity tag, wherein the chelating moiety and affinity tag form a complex with a metal ion.

5. The composition of claim 4, wherein the affinity tag is on (BC).

6. The composition of claim 5, wherein the metal-chelating moiety is a metal-chelating lipid in A.

7. The composition of any one of claims 4-6, wherein the metal-affinity tag has a pKa of about 6 or more.

8. The composition of any one of claims 4-7, wherein the metal-affinity tag disassociates from the metal-chelating moiety at a pH below normal physiological pH in a mammal.

9. The composition of claim 8, wherein the tag begins to disassociate at or below about pH 6.5.

10. The composition of any one of claims 4-9, wherein the metal-affinity tag is a tract of two or more amino acids having a pKa of about 6 or more.

11. The composition of any one of claims 4-10, wherein the metal-affinity tag is a his-tag.

12. The composition of any one of claims 4-11, wherein the metal ion is an ion of a metal selected from the group consisting of copper, nickel, zinc, iron, cobalt, manganese and magnesium.

13. The composition of claim 12, wherein the metal is nickel.

14. The composition of claim 12, wherein the metal is copper.

15. The composition of claim 12, wherein the metal is cobalt.

16. The composition of any one of claims 4-15, wherein the metal-chelating moiety comprises NTA.

17. The composition of claim 1 or 2, wherein A is conjugated to (BC) by a covalent bond.

18. The composition of claim 17, wherein the covalent bond is a releasable bond.

19. The composition of claim 18, wherein the releasable bond dissociates at a pH below normal physiological pH in a mammal.

20. The composition of claim 18, wherein the releasable bond begins to dissociate at or below about pH 6.5.

21. The composition of any one of claims 1-20, wherein A is conjugated to B.

22. The composition of any one of claims 1-20, wherein A is conjugated to C.

23. The composition of any one of claims 1-22, wherein the internalizing peptide of B is derived from Antennapedia.

24. The composition of any one of claims 1-23, wherein the biologically active agent of C is hydrophilic.

25. The composition of any one of claims 1-24, wherein the biologically active agent of C is selected from the group consisting of a peptide, a nucleic acid, and a drug that is not a peptide or nucleic acid.

26. The composition of claim 25, wherein C is a peptide and (BC) is a fusion peptide.

27. The composition of claim 26, wherein (BC) is a recombinant peptide.

28. A composition according to any one of claims 1-27, wherein said vehicles comprise a biologically active agent.

29. The composition of any one of claims 1-28, wherein said vehicles are liposomes.

30. The composition of any one of claims 1-29, wherein the biologically active agent of C is an antigen for eliciting an immune response.

31. An injectable pharmaceutical preparation comprising a composition according to any one of claims 1-30, and a pharmaceutically acceptable carrier.

32. The use of a composition according to any one of claims 1-30, for delivery of C to a cell.

33. The use of a composition according to any one of claims 1-30, for preparation of a medicament for treatment of a patient by delivery of C to a cell within the patient.

34. A method of delivering a biologically active agent to a cell in a patient, comprising administering a composition according to any one of claims 1-30, to the patient.

35. The method of claim 34, wherein the administering is by injection.